

WSDOT Materials Laboratory Library

Selected New Publications & Online Resources – March 2013

HARDCOPY BOOKS, REPORTS, MEDIA

Geotechnical Engineering, Engineering Geology

LRFD Seismic Analysis and Design of Bridges: Comprehensive Design Examples. Federal Highway Administration, National Highway Institute, 2011. NHI Course No. 130093. FHWA-NHI-11-074.
624.252 LRFD SE 2011

Pavements

Curl and Warp Analysis of the LTPP SPS-2 Site in Arizona. Federal Highway Administration, 2012.
625.84 KARAMIH 2012
<http://www.fhwa.dot.gov/publications/research/infrastructure/pavements/ltp/12068/12068.pdf>

Pavement Management 2012, Volume 1. Transportation Research Board, 2012. Transportation Research Record no. 2304, 2012.
625 HRR 2012 no2304

Available online to WSDOT staff. Go to <http://trb.metapress.com/home/main.mpx>. Click on “Browse by Issue” and select Volume 2304.

Pavement Management 2012, Volume 2. Transportation Research Board, 2012. Transportation Research Record no. 2305, 2012.
625 HRR 2012 no2305

Available online to WSDOT staff. Go to <http://trb.metapress.com/home/main.mpx>. Click on “Browse by Issue” and select Volume 2305.

Pavement Management 2012, Volume 3. Transportation Research Board, 2012. Transportation Research Record no. 2306, 2012.
625 HRR 2012 no2306

Available online to WSDOT staff. Go to <http://trb.metapress.com/home/main.mpx>. Click on “Browse by Issue” and select Volume 2306.

Using Infrared and High-Speed Ground-Penetrating Radar for Uniformity Measurements on New HMA Layers. Transportation Research Board, 2013. SHRP 2 Report S2-R06C-RR-1.
625.7 SHRP-2 2013 noS2-R06C-RR-1

<http://onlinepubs.trb.org/onlinepubs/shrp2/SHRP2prepubR06C.pdf>

Materials, Testing, Inspection

Nondestructive Testing to Identify Concrete Bridge Deck Deterioration. Transportation Research Board, 2013. SHRP 2 Report no. S2-R06A-RR-1.
625.7 SHRP-2 2013 noS2-R06A-RR-1

http://onlinepubs.trb.org/onlinepubs/shrp2/SHRP2_S2-R06A-RR-1.pdf

Specification for Thermal Spray Feedstock—Wire and Rods. American Welding Society, 2012. AWS C2.25/C2.25M:2012.
STD C2.25/C2.25M:2012.

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ELECTRONIC BOOKS, REPORTS, MANUALS & NEWSLETTERS

AASHTO Publications

Practical Guide to Cost Estimating. American Association of State Highway and Transportation Officials, 2013. EST-1.

Available online to WSDOT staff through either IHS Standards Expert or AASHTO Advantage.
From <http://www.wsdot.wa.gov/library>, under Most Requested, select AASHTO Publications.
The document number is AASHTO EST.

WSDOT Engineering & Administrative Publications

Vehicle Operator's Handbook (*revised* March 2013). M 3032.

<http://www.wsdot.wa.gov/Publications/Manuals/M3032.htm>

Vehicle Operator's Handbook and Fuel Station Locations (*revised* March 2013). M 53-55.

<http://www.wsdot.wa.gov/Publications/Manuals/M53-55.htm>

Safety Procedures and Guidelines Manual (*revised* March 2013). M 75-01.

<http://www.wsdot.wa.gov/Publications/Manuals/M75-01.htm>

Interdisciplinary Interest

Are Highways Crumbling? State and U.S. Highway Performance Trends, 1989-2008. Reason Foundation, 2013.

http://reason.org/files/us_highway_performance_20_year_trends_full_study.pdf

Focus: Accelerating Infrastructure Innovation [Newsletter]. Federal Highway Administration, March 2013.

<http://www.fhwa.dot.gov/publications/focus/13mar/13mar00.cfm>

Probabilistic Models, Methods, and Software for Evaluating Risk to Civil Infrastructure by Mojtaba Mahsuli. University of British Columbia Ph.D. dissertation, 2012.

<http://hdl.handle.net/2429/42875>

Resilient Washington State—A Framework for Minimizing Loss and Improving Statewide Recovery after an Earthquake; Final Report and Recommendations. Washington Division of Geology and Earth Resources, 2012. Information Circular 114.

http://www.dnr.wa.gov/Publications/ger_ic114_resilient_washington_state.pdf

Geotechnical Engineering, Engineering Geology

Calibration of Resistance Factors for Drilled Shafts for the FHWA Design Method. Louisiana Transportation Research Center, 2013.

http://www.ltrc.lsu.edu/pdf/2013/fr_495.pdf

Development of Simplified Analysis Procedure for Piles in Laterally Spreading Layered Soils. Pacific Earthquake Engineering Center, 2012.

http://peer.berkeley.edu/publications/peer_reports/reports_2012/webPEER-2012-05-Arduino.pdf

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Earthquake-Induced Landslide and Liquefaction Susceptibility and Initiation Potential Maps for Tsunami Inundation Zones in Aberdeen, Hoquiam, and Cosmopolis, Grays Harbor County, Washington, for a M9+ Cascadia Subduction Zone Event. Washington Division of Geology and Earth Resources, 2013. Report of Investigations 36.

http://www.dnr.wa.gov/Publications/ger_ri36_aberdeen_liquefaction.zip

Geoengineer.org Newsletter, no. 98, March 2013.

<http://www.geoengineer.org/geonews98.htm>

Guidelines for Estimation of Shear Wave Velocity. Pacific Earthquake Engineering Center, 2012.

http://peer.berkeley.edu/publications/peer_reports/reports_2012/webPEER-2012-08-DeJong.pdf

Implementation of Limit States and Load and Resistance Design of MSE Walls (SPR-3374). Purdue University, Joint Transportation Research Program (JTRP), 2012.

<http://docs.lib.purdue.edu/jtrpdocs/5>

Numerical and Reliability Analysis of Gravity Cantilever Retaining Walls Backfilled with Shredded Tires Subjected to Seismic Loads by Eleanor Lynn Huggins. Clemson University M.S. thesis, 2012.

<http://etd.lib.clemson.edu/documents/1349104455/>

Performance-Based Seismic Bridge Design. Transportation Research Board, 2013. NCHRP Synthesis no. 440.

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_440.pdf

Steel Bridge Design Handbook. Federal Highway Administration, 2012. FHWA-IF-12-062. [19 volumes]

<http://www.fhwa.dot.gov/bridge/steel/pubs/if12052/>

Vol. 16: Substructure Design <http://www.fhwa.dot.gov/bridge/steel/pubs/if12052/volume16.pdf>

Thermal Response of Integral Abutment Bridges with Mechanically Stabilized Earth Walls. Virginia Dept. of Transportation, 2013.

http://www.virginiadot.org/vtrc/main/online_reports/pdf/13-r7.pdf

Underground Engineering for Sustainable Urban Development. National Academy of Sciences, Division on Earth and Life Studies, 2013.

http://www.nap.edu/catalog.php?record_id=14670 PDF available as free download.

Pavements

Best Practices for Constructing and Specifying HMA Longitudinal Joints: Draft Final Report. Asphalt Institute [for] Federal Highway Administration, 2012.

<http://www.asphaltinstitute.org/dotAsset/69e25ae4-a615-4e51-89d4-84e6bbbed31ac.pdf>

Design and Construction Guidelines for Thermally Insulated Concrete Pavements. Minnesota Dept. of Transportation, 2013.

<http://www.cts.umn.edu/Publications/ResearchReports/pdfdownload.pl?id=2226>

The Design of Stabilised Pavements in New Zealand. New Zealand Transport Agency, 2013.

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Development of High Quality Pervious Concrete Specifications for Maryland Conditions. Maryland Dept. of Transportation, 2013.

http://www.roads.maryland.gov/OPR_Research/MD-13-SP009B4F_Pervious-Concrete-Specifications_Report.pdf

Dowel Bars for New and Existing Concrete Pavements (Folio). Washington State Dept. of Transportation, 2013.

http://www.wsdot.wa.gov/NR/rdonlyres/43EF56B4-68AB-4465-87AC-A29826132144/0/DowelBarsfolio_Feb2013Final.pdf

Feasibility Study of Using Wheel-Tracking Tests and Finite Element Modelling for Pavement Deformation Prediction. Austroads, 2013.

<https://www.onlinepublications.austroads.com.au/items/AP-T228-13>. Log in or register to download free PDF.

Guide for Maintenance of Concrete Roads. World Road Association, 2013.

<http://www.piarc.org/en/order-library/19349-en-Guide%20for%20maintenance%20of%20concrete%20roads.htm>

Impact of Changes in Profile Measurement Technology on QA Testing of Pavement Smoothness: Technical Report. Texas Dept. of Transportation, 2013.

<http://d2dtl5nnlpfr0r.cloudfront.net/tti.tamu.edu/documents/0-6610-1.pdf>

Improved Characterization of Truck Traffic Volumes and Axle Loads for Mechanistic-Empirical Pavement Design. Ohio Dept. of Transportation, 2012.

http://www.dot.state.oh.us/Divisions/Planning/SPR/Research/reportsandplans/Reports/2012/Pavements/134557_FR.pdf

Improved Design of Foamed Bituminous Stabilised Pavements. Austroads, 2013.

<https://www.onlinepublications.austroads.com.au/items/AP-T226-13> Log in or register to download free PDF.

Just in Time Technology Transfer for Portland Cement Concrete Pavement Construction and Rehabilitation. Texas Dept. of Transportation, 2012.

<http://www.depts.ttu.edu/techmrtweb/Reports/Complete%20Reports/5-9045-05-1.pdf>

Reduction of Construction Time and Cost of Road Pavements. World Road Association, 2012.

<http://www.piarc.org/en/order-library/16878-en-Reduction%20of%20construction%20time%20and%20cost%20of%20road%20pavements.htm>

Sustainable Stabilization of Sulfate-Bearing Soils with Expansive Soil-Rubber Technology. Colorado Dept. of Transportation, 2013.

<http://www.coloradodot.info/programs/research/pdfs/2013/esr.pdf/view>

Materials, Testing, Inspection

Asphalt Mixture Performance Tester (AMPT) [TechBrief]. Federal Highway Administration, 2012. FHWA-HIF-13-005.

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Evaluating Applications of Field Spectroscopy Devices to Fingerprint Commonly Used Construction Materials. Transportation Research Board, 2013. SHRP 2 Report S2-R06B-RR-1.

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Evaluation Protocol for Warm Mix Asphalt. Austroads, 2013.

<https://www.onlinepublications.austroads.com.au/items/AP-T231-13>. Log in or register to download free PDF.

High-Performance/High-Strength Lightweight Concrete for Bridge Girders and Decks. Transportation Research Board, 2013. NCHRP Report no. 733.

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_733.pdf

Hot Mix Asphalt Concrete Density, Bulk Specific Gravity and Permeability. West Virginia Division of Highways, 2012.

<http://www2.cemr.wvu.edu/~wwwasph/wvdohreports/HMAC%20Density,%20Gmb%20and%20Permeability-Yan%2006-2012.pdf>

Investigations into the Effects of Polymer Segregation and Degradation in Polymer Modified Binders. Austroads, 2013.

<https://www.onlinepublications.austroads.com.au/items/AP-227-13> Log in or register to download free PDF.

Laboratory Evaluation of Warm Mix Asphalt Mixes. Austroads, 2013.

<https://www.onlinepublications.austroads.com.au/items/AP-T230-13> Log in or register to download free PDF.

Predicting the Initial Retroreflectivity of Pavement Markings from Glass Bead Quality. Transportation Research Board, 2013, NCHRP Report no. 743.

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_743.pdf

Standard Guide for Laboratory Immersion Corrosion Testing of Metals. NACE TM0169/ASTM G31. 2012.

Available online to WSDOT staff through the ASTM DOT Web Portal.

From <http://wwwi.wsdot.wa.gov/library>, under Most Requested, select ASTM Standards.

The ASTM standard number is G31-12a.